



# Coimisiún na Scrúduithe Stáit State Examinations Commission

S36

JUNIOR CERTIFICATE EXAMINATION, 2004

## SCIENCE - ORDINARY LEVEL

[N.B. Not for Science – Local Studies Candidates]

THURSDAY, 17 JUNE – AFTERNOON, 2.00 to 4.30

### INSTRUCTIONS

1. Write your **examination number** in the box provided on this page.
2. Answer **SECTION A**.
3. Answer **ANY THREE SECTIONS** from **SECTIONS B, C, D, E**.
4. Answer **all questions** in the spaces provided. If you require extra space, there are pages provided at the back of this booklet.

Centre Number

Examination Number

For examiner use only

1. Total of end of page totals	
2. Aggregate total of all disallowed question(s)	
3. Total marks awarded (1 minus 2)	

For examiner use only

QUESTION MARK

Section A	Q.1	
Section B	Q.2	
	Q.3	
	Q.4	
Section C	Q.5	
	Q.6	
	Q.7	
Section D	Q.8	
	Q.9	
	Q.10	
Section E	Q.11	
	Q.12	
	Q.13	
	Q.14	
	Q.15	
	Q.16	

TOTAL

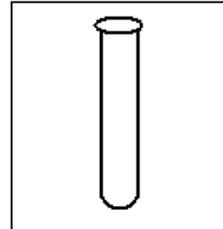
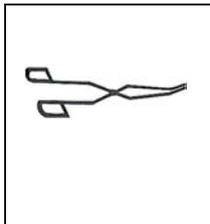
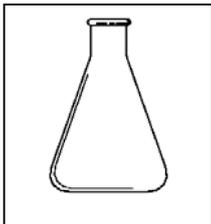
GRADE

SECTION A – CORE (144 MARKS)

Answer any 12 parts (a), (b), (c), etc. from this Section.

Question 1

(a) Name the following pieces of equipment.



NAME \_\_\_\_\_

(b) Our **solar system** consists of the Sun and **nine planets**. The Earth is one of the planets.

Name **two** others. 1 \_\_\_\_\_ 2 \_\_\_\_\_

The diagram shows Crooke's radiometer.

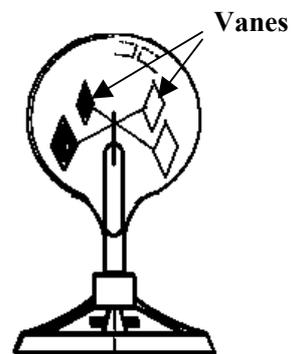
What **happens** to the vanes when light shines on a

Crooke's radiometer? \_\_\_\_\_

\_\_\_\_\_

What does this tell us about **light**? \_\_\_\_\_

\_\_\_\_\_



(c) Name the piece of equipment shown. \_\_\_\_\_

What is the piece of equipment **used for**?

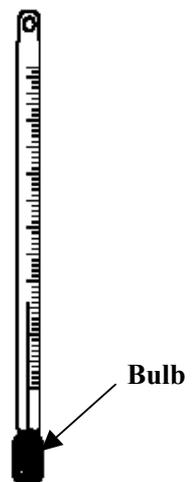
\_\_\_\_\_

Name a **liquid** that could be placed in the bulb.

\_\_\_\_\_

What happens to the liquid when the bulb is **heated**?

\_\_\_\_\_



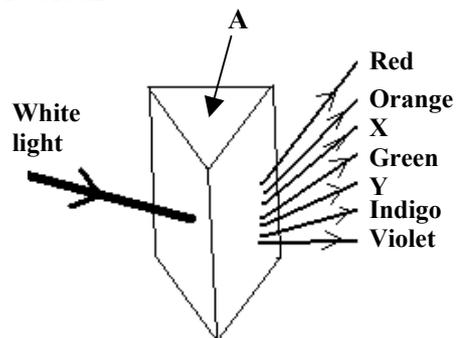
(d) The diagram shows how white light forms a **spectrum of colours**.

Name the **process** shown. \_\_\_\_\_

Name the piece of equipment **A**. \_\_\_\_\_

Name the **colour X**. \_\_\_\_\_

Name the **colour Y**. \_\_\_\_\_



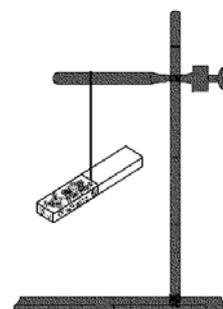
(e) A **bar magnet** was hung freely as shown in the diagram.

What happens if the **North** pole of another magnet is brought close to the **North** pole of the hanging magnet? \_\_\_\_\_

What happens if a **North** pole is brought close to the **South** pole of the hanging magnet? \_\_\_\_\_

Why is a **wooden stand** used? \_\_\_\_\_

Give **one** everyday **use** of a magnet. \_\_\_\_\_



(f) Choose a **word** from the list on the right to complete the sentences below.

All the \_\_\_\_\_ of an element are the **same chemically**.

The \_\_\_\_\_ and \_\_\_\_\_ are located **in the nucleus** of the atom.

The \_\_\_\_\_ are located **outside the nucleus**.

**NEUTRONS**

**ATOMS**

**ELECTRONS**

**PROTONS**

(g) A mixture of **sand and water** can be separated using the method shown in the diagram.

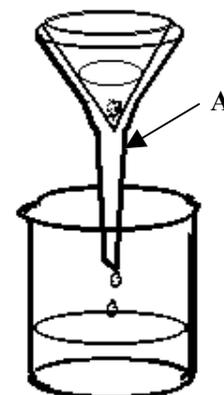
Name the method of separation shown. \_\_\_\_\_

The **filter paper** will not allow \_\_\_\_\_ to pass into the beaker underneath.

Name the piece of equipment labelled **A**. \_\_\_\_\_

Name **one other way** to separate sand and water.

\_\_\_\_\_



(h) **Name** the piece of equipment shown in the diagram.

\_\_\_\_\_

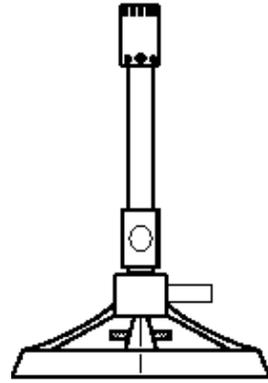
Give **one use** of this piece of equipment in the laboratory.

\_\_\_\_\_

Give **two safety precautions** when using this piece of equipment in the laboratory.

1 \_\_\_\_\_

2 \_\_\_\_\_



(i) State whether each of the following is a **solid**, a **liquid** or a **gas** at room temperature.

SUBSTANCE	STATE AT ROOM TEMPERATURE
Helium	
Sulphur	
Alcohol	
Mercury	

(j) The **fire triangle** on the right is used to show the three things that a fire needs in order to burn.

What is needed at **X** to keep a fire burning? \_\_\_\_\_

Name **one** type of fire extinguisher. \_\_\_\_\_

Give **two ways** of reducing the risk of fire in the home.

1 \_\_\_\_\_

2 \_\_\_\_\_



(k) **Ecology** is the study of plants, animals and the habitat they live in.

Name a habitat you have studied. \_\_\_\_\_

Name **one plant** found growing in this habitat. \_\_\_\_\_

Name **one animal** found living in this habitat. \_\_\_\_\_

Name **one substance** that causes **pollution** in this habitat. \_\_\_\_\_

(l) Choose an **organ** or **part of the human body** from the list on the right, which

makes human **sperm cells** \_\_\_\_\_

releases female **egg cells** \_\_\_\_\_

makes us aware of **sounds** \_\_\_\_\_

produces **urine**. \_\_\_\_\_

- OVARY**
- EAR**
- KIDNEY**
- TESTES**

(m) **Milk** is a good source of protein and minerals.

Name **one** important **mineral** found in milk. \_\_\_\_\_

Give **one use** for this mineral in the human body. \_\_\_\_\_

Name **one other food** rich in protein. \_\_\_\_\_

State **one way** in which humans use protein in the body.  
\_\_\_\_\_

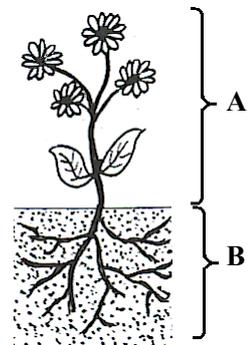
(n) The diagram shows a **flowering plant**.

**Name** the part labelled **A**. \_\_\_\_\_

**Name** the part labelled **B**. \_\_\_\_\_

Give one **function** of part **A**. \_\_\_\_\_

Give one **function** of part **B**. \_\_\_\_\_



(o) We use many products that come from plants and animals. Choose **products** from the list on the right to **complete** the table below.

ANIMAL PRODUCT	PLANT PRODUCT

- WOOL**
- PAPER**
- MAHOGANY**
- HONEY**

**SECTION B – PHYSICS (72 MARKS)**

There are **THREE** questions in this Section. Answer any **TWO** of these questions.

**Question 2**

(a) Choose a **word** from the list on the right to complete the sentences below.

**Gaps** between railway tracks allow for \_\_\_\_\_ . (3)

**Heat** travels along a **metal rod** by \_\_\_\_\_ . (3)

**Aeroboard** is used in building for \_\_\_\_\_ . (3)

**Heat** travels through a **liquid** by \_\_\_\_\_ . (3)

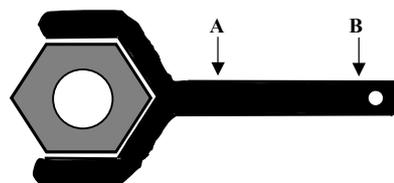
- CONDUCTION**
- CONVECTION**
- EXPANSION**
- INSULATION**

(b) The spanner shown in the diagram acts as a **lever** to apply a turning force to the nut.

Give **two** other everyday **examples** of levers.

1 \_\_\_\_\_ (3)

2 \_\_\_\_\_ (3)



If the same force is used at **A** and **B**, which will give the greatest turning effect? \_\_\_\_\_ (3)

**Name** the **force** that pulls objects towards the centre of the earth. \_\_\_\_\_ (3)

(c) Describe, with the aid of a labelled diagram, an experiment to **show that air exerts pressure**. (12)

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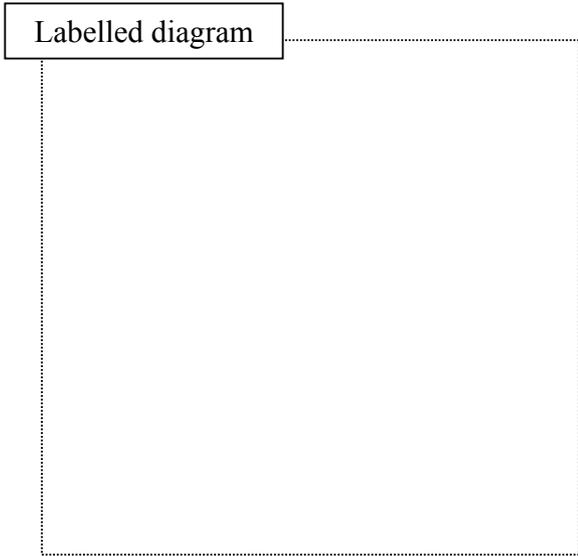
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**Question 3**

(a) Choose a **word** from the list on the right to complete the sentences below.

Sound is a **form** of \_\_\_\_\_ (3)

Sound needs a \_\_\_\_\_ to **travel** through. (3)

An \_\_\_\_\_ is a **reflected** sound. (3)

Sound is **produced** by \_\_\_\_\_ (3)

- VIBRATIONS**
- ECHO**
- ENERGY**
- SUBSTANCE**

(b) The instrument shown in the diagram is a **periscope**.

**Name** the pieces of equipment labelled **A** used to make the periscope.

\_\_\_\_\_ (3)

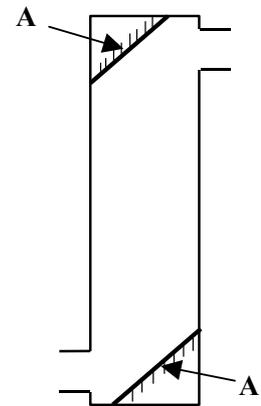
What happens to a **light ray** when it shines on **A**?

\_\_\_\_\_ (3)

Give **one** everyday **use** for a periscope. \_\_\_\_\_ (3)

\_\_\_\_\_ (3)

A \_\_\_\_\_ is formed when an object **blocks** a **ray of light**. (3)



(c) The diagram shows a piece of equipment **A** containing water.

**Name** the piece of equipment, **A**, containing the water.

\_\_\_\_\_ (3)

What is the **volume** of **water** in **A**?

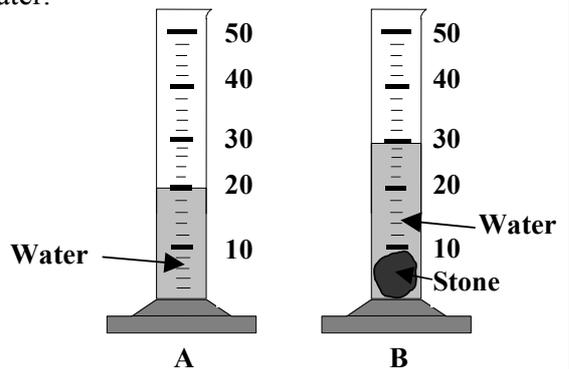
\_\_\_\_\_ cm<sup>3</sup>. (3)

A stone was then added.

What is the **volume** of the **stone and the water**

in **B**? \_\_\_\_\_ cm<sup>3</sup>. (3)

What is the **volume** of the **stone**? \_\_\_\_\_ cm<sup>3</sup>. (3)



**Question 4**

(a) Choose a **word** from the list on the right to complete the sentences below.

The ESB **supply** a.c. electricity at **230** \_\_\_\_\_ . (3)

The unit of electricity used by the ESB for **costing** is the \_\_\_\_\_ . (3)

The unit of **electrical current** is the \_\_\_\_\_ . (3)

The unit of **power** you would find stamped on a **light bulb** is the \_\_\_\_\_ . (3)

- AMPERE
- VOLTS
- WATT
- KILOWATT-HOUR

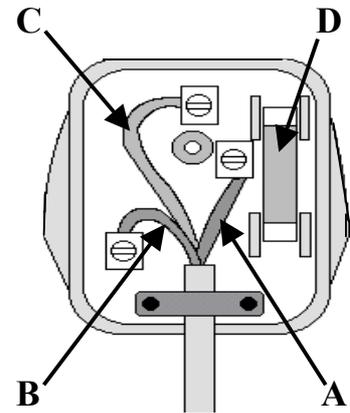
(b) The diagram shows the inside of a **three-pin plug**.

Name the **brown** wire labelled **A**. \_\_\_\_\_ (3)

Name the **blue** wire labelled **B**. \_\_\_\_\_ (3)

Name the **green & yellow** wire labelled **C**.  
\_\_\_\_\_ (3)

Name the **device** labelled **D**. \_\_\_\_\_ (3)



(c) A **1.5 kilowatt (kW) heater** is used to heat a room for **four hours**.

How many **units** of electricity are used? \_\_\_\_\_ (3)

How much does it **cost** to heat the room if **one unit** of electricity costs **11 cent**?  
\_\_\_\_\_ (3)

Give **one reason** why such a heater should be **earthed**.  
\_\_\_\_\_ (3)

Give **one other electrical safety precaution** in the home.  
\_\_\_\_\_ (3)

**SECTION C – CHEMISTRY (72 MARKS)**

There are **THREE** questions in this Section. Answer any **TWO** of these questions.

**Question 5**

- (a) **Fossil fuels** are used for heating our homes. Choose a **term** from the list on the right to complete the sentences below.

\_\_\_\_\_ is an everyday **example** of a fossil fuel. (3)

Fossil fuels are used as a **source** of \_\_\_\_\_. (3)

There is a **limited supply** of \_\_\_\_\_ energy sources. (3)

Water and \_\_\_\_\_ are formed when a fossil fuel **burns**. (3)

**NON-RENEWABLE**  
**CARBON DIOXIDE**  
**ENERGY**  
**COAL**

- (b) There are two types of **water hardness**. Name **both** types.

1 \_\_\_\_\_ 2 \_\_\_\_\_ (6)

Which type of hardness can be removed by **boiling**?

\_\_\_\_\_ (3)

Give **one advantage** of hard water.

\_\_\_\_\_ (3)

- (c) The diagram shows how **oxygen gas** can be made in the laboratory.

What **colour** is the manganese dioxide? \_\_\_\_\_ (3)

Name the **liquid X** used to prepare oxygen.

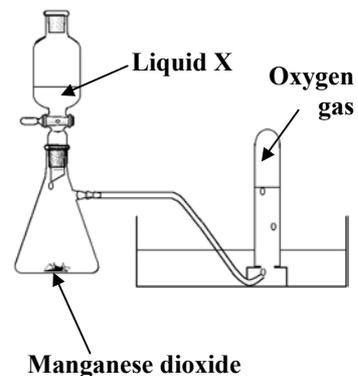
\_\_\_\_\_ (3)

What is the **test** for oxygen gas? \_\_\_\_\_

\_\_\_\_\_ (3)

Give **one use** for oxygen gas. \_\_\_\_\_

\_\_\_\_\_ (3)



**Question 6**

(a) Choose a **word** from the list on the right to complete the sentences below.

An example of an **acid** is \_\_\_\_\_ . (3)

An example of a **base** is \_\_\_\_\_ . (3)

An example of an **indicator** is \_\_\_\_\_ . (3)

**Hydrochloric acid** and **sodium hydroxide** react to form water and \_\_\_\_\_ . (3)

**SODIUM HYDROXIDE**

**LITMUS**

**SODIUM CHLORIDE**

**VINEGAR**

(b) Choose a **word** from the list on the right to complete the sentences below.

The elements in **Group 1** are called the \_\_\_\_\_ metals. (3)

**Na** is the chemical **symbol** for \_\_\_\_\_ . (3)

The Group 1 metals are all \_\_\_\_\_ . (3)

Sodium reacts with **oxygen** in the air to form sodium \_\_\_\_\_ . (3)

**SOFT**

**ALKALI**

**OXIDE**

**SODIUM**

(c) The diagram shows an apparatus that may be used to **separate water and alcohol**.

**Name** this separation technique.

\_\_\_\_\_ (3)

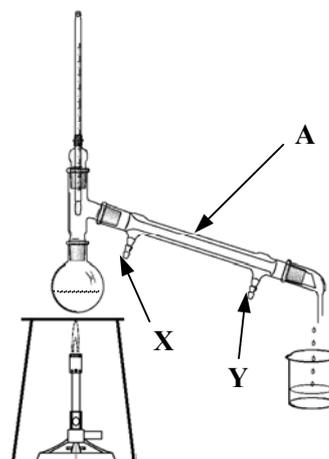
**Name** the part labelled **A**.

\_\_\_\_\_ (3)

Which part, **X** or **Y**, is connected to the **tap**?

\_\_\_\_\_ (3)

Which of the two liquids collects in the **beaker** first? \_\_\_\_\_ (3)



**Question 7**

(a) Choose a **term** from the list on the right to complete the sentences below.

**Burning** is an example of a \_\_\_\_\_ **change**. (3)

**Making a magnet** is an example of a \_\_\_\_\_ **change**. (3)

**Air** is an example of a \_\_\_\_\_ . (3)

**Table salt** is an example of a \_\_\_\_\_ . (3)

- MIXTURE**
- PHYSICAL**
- COMPOUND**
- CHEMICAL**

(b) **Rusting** causes damage to iron.

Give **two conditions** necessary for an iron nail to rust.

1 \_\_\_\_\_ (3)

2 \_\_\_\_\_ (3)

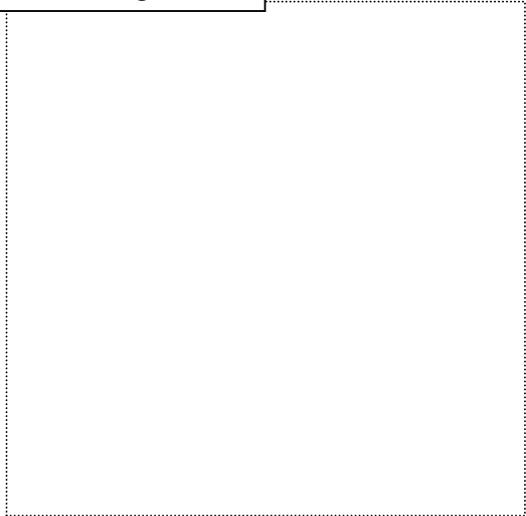
Give **one** way to stop iron rusting. \_\_\_\_\_ (3)

A **mixture** of metals is called an \_\_\_\_\_ . (3)

(c) Describe, with the aid of a labelled diagram, a laboratory experiment to **obtain a pure sample of salt from a solution of salt and water**. (12)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Labelled diagram



**SECTION D – BIOLOGY (72 MARKS)**

There are **THREE** questions in this Section. Answer any **TWO** of these questions.

**Question 8**

- (a) The human body has a **skeleton** made of bone. Give **two functions** of the skeleton.

1 \_\_\_\_\_ 2 \_\_\_\_\_ (6)

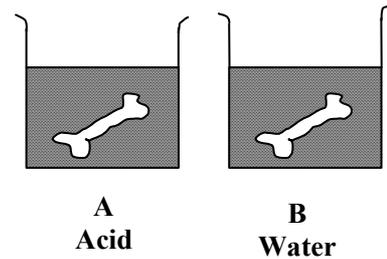
The experiment on the right was set up and left for a few days. One bone was placed in acid and the second in water as shown.

What happens to the bone in **A**?

\_\_\_\_\_ (3)

What happens to the bone in **B**?

\_\_\_\_\_ (3)



- (b) Choose a **word** from the list on the right to complete the sentences below.

The **40 weeks** of growth and development of the human foetus is called \_\_\_\_\_ . (3)

The foetus develops into a **baby** in the \_\_\_\_\_ . (3)

The \_\_\_\_\_ cycle lasts about **28 days**. (3)

The **shedding** of the **lining** of the womb from the human body is known as \_\_\_\_\_ . (3)

**MENSTRUATION**

**MENSTRUAL**

**PREGNANCY**

**WOMB**

- (c) A student breathes out into limewater in a test-tube. The limewater changes colour.

What **colour change** occurs to the limewater? \_\_\_\_\_ (3)

**Name** the **gas** which causes this colour change. \_\_\_\_\_ (3)

**Name** the **organ** used by humans for breathing. \_\_\_\_\_ (3)

Our breathing system carries \_\_\_\_\_ **gas** into the body for respiration. (3)

**Question 9**

- (a) Bacteria, fungi and viruses are types of micro-organism. Choose a **word** from the list on the right to complete the sentences below.

**Bacteria** help change **milk** into \_\_\_\_\_ . (3)

A **disease** caused by a **fungus** is \_\_\_\_\_ . (3)

A fungus we can **eat** is a \_\_\_\_\_ . (3)

A **disease** caused by a **virus** is \_\_\_\_\_ . (3)

**ATHLETE'S FOOT**

**MUSHROOM**

**AIDS**

**CHEESE**

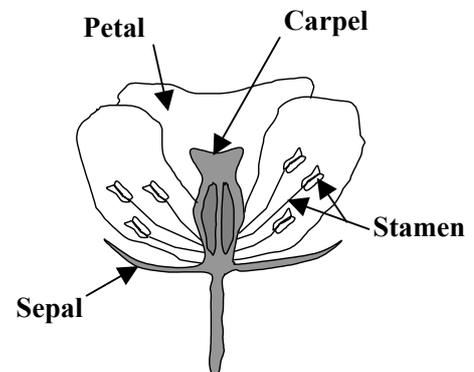
- (b) The diagram shows the **structure** of a flower. Use the **labels** from the diagram to complete the following sentences.

The \_\_\_\_\_ attracts **insects**. (3)

The **female** reproductive part of the flower is called the \_\_\_\_\_ . (3)

The **male** reproductive part of the flower is called the \_\_\_\_\_ . (3)

The \_\_\_\_\_ **protects** the flower before it blooms. (3)



- (c) Plants make food by **photosynthesis**. Answer the following questions about photosynthesis.

Which **part** of the plant makes the most food? \_\_\_\_\_ (3)

Name the **type of food** made by plants. \_\_\_\_\_ (3)

What **gas** is taken in by plants and is used to make food? \_\_\_\_\_ (3)

Why do plants not make food at **night**?  
 \_\_\_\_\_ (3)

**Question 10**

(a) Choose an **organ** or **part of the body** from the list on the right, which

removes **waste** from the blood \_\_\_\_\_ (3)

**pumps blood** around the body \_\_\_\_\_ (3)

breaks down the **food** we eat for absorption  
\_\_\_\_\_ (3)

releases **sweat** from the body. \_\_\_\_\_ (3)

- HEART**
- KIDNEY**
- SKIN**
- DIGESTIVE SYSTEM**

(b) **Blood** is made up of different blood cells floating in a liquid.

Name **two** types of blood cell.

1 \_\_\_\_\_ 2 \_\_\_\_\_ (6)

Name the **liquid** part of blood. \_\_\_\_\_ (3)

Name **one substance** carried by the blood. \_\_\_\_\_ (3)

(c) Describe, with the aid of a labelled diagram, an experiment to **show the flow of water upward through a plant.** (12)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Labelled diagram

**SECTION E – APPLIED SCIENCE (72 MARKS)**

**There are SIX questions in this Section. Answer any TWO of these questions.**

**Question 11 - Earth Science**

(a) Choose a **number** from the list on the right to complete the sentences below.

The **earth rotates** on its axis once every \_\_\_\_\_ hours. (3)

A **leap year** occurs once every \_\_\_\_\_ years. (3)

The **earth travels** around the **sun** once every \_\_\_\_\_ days. (3)

The **moon** travels around the **earth** once every \_\_\_\_\_ days. (3)

- |             |
|-------------|
| <b>365¼</b> |
| <b>24</b>   |
| <b>4</b>    |
| <b>28</b>   |

(b) A **rain-guage** is used to measure \_\_\_\_\_ . (3)

An **anemometer** is used to measure \_\_\_\_\_ . (3)

**Humidity** is the amount of \_\_\_\_\_ in the air. (3)

**Humidity** can be **measured** using a \_\_\_\_\_ . (3)

(c) Describe, with the aid of a labelled diagram, an experiment to show **the effect of temperature on the rate of evaporation of water.** (12)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Labelled diagram

**Question 12 - Horticulture**

(a) Choose a **word** from the list on the right to complete the sentences below.

The growth of a **seed** into a plant is \_\_\_\_\_ (3)

The **time** between seed production and when it grows into a plant is called \_\_\_\_\_ (3)

Growth of plants in **water containing nutrients** is called \_\_\_\_\_ (3)

A \_\_\_\_\_ produces a **plant identical** to the parent plant. (3)

- HYDROPONICS**
- CUTTING**
- GERMINATION**
- DORMANCY**

(b) **Soil** is commonly used in the growing of **plants** in horticulture.

Name **one non-living part** of a fertile soil. \_\_\_\_\_ (3)

Give **one** way in which **earthworms** improve soil structure. \_\_\_\_\_ (3)

Name a plant from which we get **cut flowers**. \_\_\_\_\_ (3)

Give **one** way to keep cut flowers fresh. \_\_\_\_\_ (3)

(c) You are given 100 seeds. Describe an experiment you would carry out to **find the percentage germination of the seeds**. (12)

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**A - PLASTICS**

- (i) Give **one** use for **polystyrene** in the home. \_\_\_\_\_ (3)
- (ii) Most plastics are **made** from \_\_\_\_\_. (3)
- (iii) Describe, with the aid of a labelled diagram, an experiment to **compare the hardness of two plastics**. (12)

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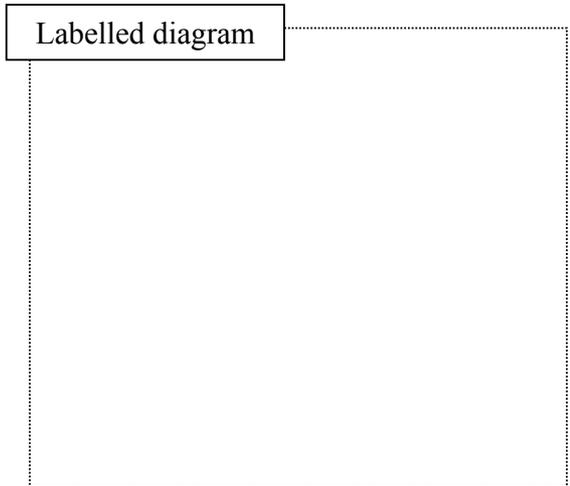
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**B - TEXTILES**

- (i) Choose the correct **term** from the list on the right to complete the sentences below

Yarn is **made** from \_\_\_\_\_. (3)

Yarn is **used** to make \_\_\_\_\_. (3)

- FIBRES**
- FABRICS**

- (ii) Describe, with the aid of a labelled diagram, an experiment to **compare the resistance to wear of two textiles**. (12)

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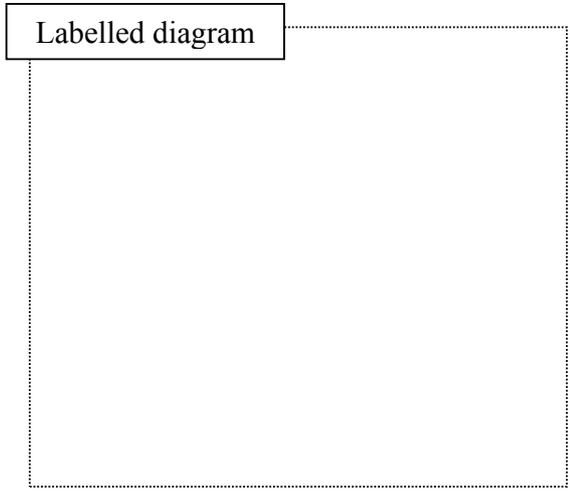
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**C - METALS**

- (i) Name **one** metal that is found **free in nature**. \_\_\_\_\_ (3)
- (ii) Give **one use** for the metal you have named. \_\_\_\_\_ (3)
- (iii) Describe, with the aid of a labelled diagram, an experiment to **compare the flexibility of two metals**. (12)

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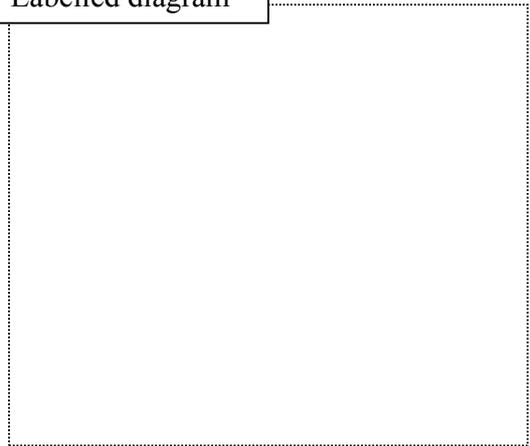
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Labelled diagram



**D - TIMBER**

- (i) Choose the correct **term** from the list on the right to complete the sentences below.  
Trees with **broad leaves** form \_\_\_\_\_ **wood**. (3)  
Trees with **needle-like leaves** form \_\_\_\_\_ **wood**. (3)
- (ii) Describe, with the aid of a labelled diagram, an experiment to **show that grain direction affects the bending strength of timber**. (12)

**SOFT**  
**HARD**

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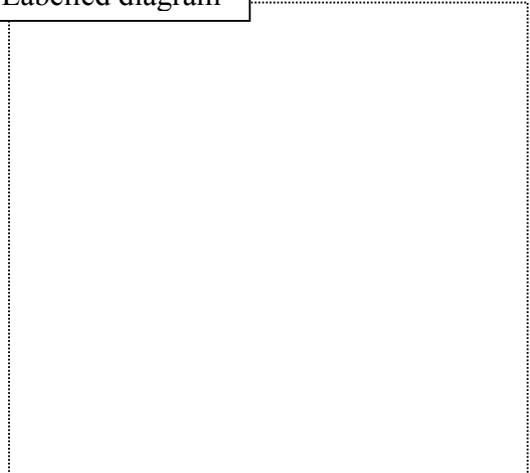
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Labelled diagram



**Question 14 - Food**

(a) Choose a **food** from the list on the right that

has a large amount of **fat** \_\_\_\_\_ (3)

turns **Benedict's** or **Fehling's** solutions

brick-red when heated \_\_\_\_\_ (3)

is rich in **vitamin C** \_\_\_\_\_ (3)

is a good source of **fibre**. \_\_\_\_\_ (3)

- BRAN**
- ORANGE**
- BUTTER**
- GLUCOSE**

(b) **Food additives** are used in many foods.

Give **one use** of additives, other than preservation. \_\_\_\_\_ (3)

Give **one harmful effect** of a food additive. \_\_\_\_\_ (3)

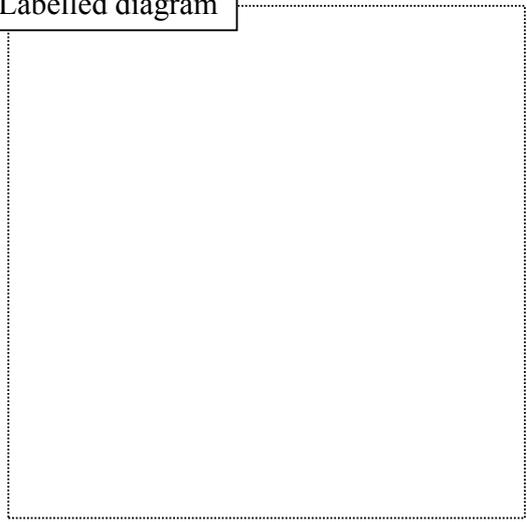
**Name a method** used to preserve meat. \_\_\_\_\_ (3)

**Name a food** that is preserved by **pasteurisation**. \_\_\_\_\_ (3)

(c) Describe, with the aid of a labelled diagram, a laboratory experiment to **make yoghurt**. (12)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Labelled diagram



**Question 15 - Electronics**

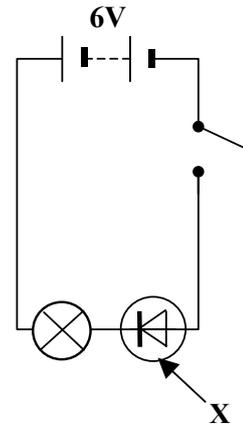
(a) The diagram shows a circuit.

Name the device labelled **X**. \_\_\_\_\_ (3)

Give **one use** for this device. \_\_\_\_\_ (3)

Will the lamp light if the **switch** is closed?  
 \_\_\_\_\_ (3)

The device **X** is connected in \_\_\_\_\_ **bias**. (3)



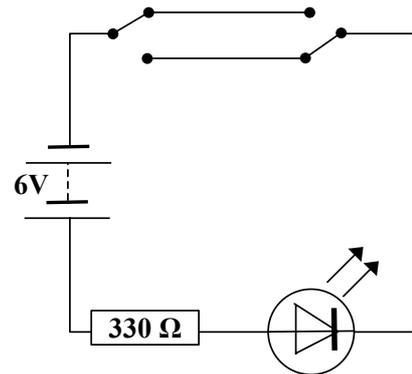
(b) What is the function of the **resistor** in the circuit?

\_\_\_\_\_ (3)

Will the **LED light** in the circuit as shown?  
 \_\_\_\_\_ (3)

Name the type of **switch** shown in the circuit.  
 \_\_\_\_\_ (3)

**Where** in a house might you find this type of switch?  
 \_\_\_\_\_ (3)



(c) Draw a circuit diagram showing **two switches**, a **battery** and a **buzzer** connected so that closing either switch sounds the buzzer. (12)

Circuit diagram

**Question 16 - Energy Conversions**

(a) Match an **energy change** from the list with that occurring in each of the following.

<b>CHEMICAL TO LIGHT</b>	<b>KINETIC TO HEAT</b>	<b>CHEMICAL TO HEAT</b>
<b>POTENTIAL TO KINETIC</b>	<b>LIGHT TO CHEMICAL</b>	<b>KINETIC TO SOUND</b>

**Rubbing** your hands together \_\_\_\_\_ (3)

A guitar string **vibrating** \_\_\_\_\_ (3)

A **battery** torchlight \_\_\_\_\_ (3)

A plant making food by **photosynthesis** \_\_\_\_\_ (3)

Water **falling** from the top of a dam \_\_\_\_\_ (3)

A **fuel** being burned \_\_\_\_\_ (3)

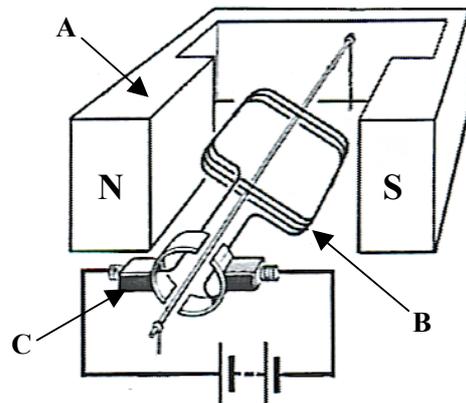
(b) **Name** the device shown in the diagram. \_\_\_\_\_ (3)

**Name** parts **A**, **B**, and **C** of the device.

**A** \_\_\_\_\_ (3)

**B** \_\_\_\_\_ (3)

**C** \_\_\_\_\_ (3)



What happens to part **B** when the electric current flows?

\_\_\_\_\_ (3)

**Name** one piece of equipment in the home that uses this type of a device.

\_\_\_\_\_ (3)



